comprises:

at least one crystallizable thermoplastic;

at least one UV stabilizer; and

at least one flame retardant;

where at least the flame retardant is provided as a compounded first masterbatch, and preferably also the UV stabilizer, where the UV stabilizer is thermally stable at temperatures exceeding 240°C, is provided in the first masterbatch or as a compounded second masterbatch during production of the film, where said oriented film has a luminous transmittance of 80%; a surface gloss of 100; a haze of 20% and a yellowness index of 10.

Please cancel claim 12.

REMARKS

On page 2 paragraph 2 of the Office Action, the Examiner rejected claims 1 -4, 6 - 8 and 12 under 35 U.S.C. 103 as being unpatentable over Rakos et al. in view of Oishi et al. and Irick et al. The Examiner notes that Rakos et al. do not teach the incorporation of a flame retardant into the disclosed film nor a UV stabilizer that is thermally stable at temperatures above 240°C. The Examiner relies on Oishi et al. to teach the addition of a flame retardant to modify a polymer resin. The Examiner relies on Irick et al. to teach the addition of UV stabilizers to polyesters. This rejection, particularly in view of twice amended claim 1 is respectively traversed.

What is unique about the present invention, as clearly expressed in the specification starting on page 3 is the recognition that a polyester film having various additives still retains or possesses good optical properties (see page 4 of the specification). Good optical properties in an oriented film having a thickness from 5 to 300 μm is difficult to attain by itself. Retaining these properties while adding a UV stabilizer and a flame retardant is a surprising result. In order to better define the good optical properties, Claim 1 (twice amended) has now defined those optical properties as having a luminous transmittance of 80%; a surface gloss of 100; a haze of 20% and a yellowness index of

10. Support for these additional elements of claim 1 can be found on page 12 of the specification and with respect to the yellowness index, page 4.

The Examiner notes on page 3 of the Office Action that Rakos et al. do not teach a film with a luminescent transmittance of 80% or higher. The Examiner also notes that neither Oishi et al. or Irick et al. teach such a limitation. The Examiner does state that it is logical to believe that from the examples of Rakos et al. the transmittance of the film is a function of film thickness and silica particle loading. What the Examiner fails to appreciate, however, is that the addition of a UV stabilizer and a flame retardant may also impair the luminous transmittance of a film. Therefore it is not obvious to those skilled in the art at the time the invention was made to optimize the silica particle loading to achieve the desired level of transmittance because this optimization, as stated by the Examiner would not account for the UV stabilizer and the flame retardant compositions added to the polyester.

On page 4 of the Office Action the Examiner states "if a film were made with a composition resulting in a transmission of 80% or greater, the haze would necessarily be below 20%". This is an erroneous statement and the Examiner will find no support for this statement in any book, text, or patent. The Examiner is making the mistake that luminous transmission and haze are related. In fact there is no relationship between these characteristics, and each characteristic measures something different. Luminous transmittance is the ratio of total light transmitted divided by the incident light. This ratio is then expressed as a percentage. See the paragraph bridging pages 18 and 19 of the specification and ASTMD-1003. Luminous transmission has nothing to do with absorption and reflection as the Examiner seems to indicate on page 4 of the Office Action.

With respect to haze, it is the percentage portion of transmitted light which deviates by more than 2 ½°. Haze is also explained in ASTMD-1003. The Examiner's suggestion that the total of luminous transmission plus haze must equal 100% is in error. You cannot take the luminous transmission subtract that from 100% to get the percentage haze. There is no relationship between these numbers.

The Examiner correctly states that the sum total of transmission, absorption and reflection must be equal 100%. However luminous transmission and haze are not concerned with absorption and reflection.

Lastly the Examiner makes the statement "It would obvious to one of ordinary skill in the art to optimize the concentration of gloss enhancing agent to achieve the desired glossiness of the film". This statement is a simplification and not based on any prior art document. In particular, a gloss-enhancing agent would add further particles to the polyester film and would affect the optical properties. A film that naturally possesses such optical properties without the addition of any gloss-enhancing agent is a very desirable and a difficult characteristic to achieve.

Lastly, it is noted that none of the references to Rakos et al., Oishi et al. or Irick et al. teaches employment of a UV stabilizer that is thermally stable at temperatures above 240°C. While the Examiner notes that Irick et al. teach a UV stabilizer that is mentioned in the specification, it is still important to consider the purity of such a UV stabilizer. If the UV stabilizer is only 60% pure, for example, will it meet the thermal stability at temperatures above 240°C? Merely finding a recitation that such a product is a UV stabilizer does not automatically assume that it would inherently have such a thermal stable characteristic.

The Examiner rejects claim 5 on page 7 of the Office Action under the 4-referenced combination of Rakos et al., Oishi et al., Irick et al. and further in view of Gareiss et al. It is submitted that Gareiss et al. does not supply the deficiencies of the other 3 references relative to Claim 1 twice amended, and it is believed that such a 4-reference combination is not obvious in any sense of the word. Furthermore, it is noticed that Gareiss et al. teach the addition of another composition. The Examiner seems to overlook the fact that the addition of another composition would further impair the good optical properties claimed in twice amended Claim1.

On page 8 of the Office Action the Examiner rejects Claims 9 and 10 under 35 U.S.C. 103 by

combining 5 references, namely Rakos et al., Oishi et al., Irick et al., Schreck et al., and Kishida et al. The Examiner suggests that the hollow particulates taught by Schreck et al. could be incorporated into the thermal plastic film of the modified Rakos et al. film. Again, this would definitely impair the good optical properties set forth in Claim 1, twice amended. The Examiner compounds this by suggesting that the thermal plastic film could be further improved by the addition of pentaerythrityl propionate to the thermal plastic film. Again, the addition of these particles along with the particles suggested by Schreck et al. would definitely impair the optical properties as now claimed in twice amended Claim1.

Lastly, on page 10 of the Office Action the Examiner rejects claim 11 under 35 U.S.C. 103 in view of a 6-reference combination. Again the Examiner seeks to add another composition to the modified Rakos et al. film. With the addition of the particles or composition taught by Oishi et al., Irick et al., Schreck et al., Kishida et al., and now Brunow et al., the optical properties set forth in amended Claim 1 cannot be met. Furthermore, a 6-reference combination is of doubtful obviousness.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned **Version With Markings To Show Changes Made**.

In view of the Amendments to the claims, and in light of these remarks, it is submitted that the present application is now in condition for allowance and such is earnestly solicited.

Respectfully submitted,

Klaus Schweitzer
(See attached Limited Recognition Form)
ProPat, LLC
2912 Crosby Road
Charlotte, North Carolina 28211
Telephone: (704) 365-4881
Fax: (704) 365-4851

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims

Claim 1 has been amended as follows:

1. (Once Amended) A transparent, low-flammability, UV-resistant, oriented film made from a film forming thermoplastic and having a thickness of from 5 to 300 μm, wherein the film comprises:

at least one crystallizable thermoplastic;

at least one UV stabilizer; and

at lease one flame retardant;

where at least the flame retardant is provided as a compounded first masterbatch, and preferably also the UV stabilizer, where the UV stabilizer is thermally stable at temperatures exceeding 240°C, is provided in the first masterbatch or as a compounded second masterbatch during production of the film, where said oriented film has a luminous transmittance of 80%; a surface gloss of 100; a haze of 20%; and a yellowness index of 10.

Claim 12 has been cancelled.